CITY OF ALBUQUERQUE

ALBUQUERQUE
Making History

April 7, 2005

Richard Hall, PE
Bohannan Huston, Inc
7500 Jefferson NE
Albuquerque, NM 87109

Re: NMUI Well No 9 Grading and Drainage Plan
Engineer's Stamp dated 12-27-04, (C9/D5)

Dear Mr. Hall,

Based upon the information provided in your submittal dated 12-27-04, the above referenced plan is approved for Preliminary Plat, Site Plan and Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer Certification of the grading plan per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Principal Engineer, Planning Dept
Development and Building Services

C: Bob Gay, NMUI
file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

POND J
CAPACITY = 4.72 AC-FT
MAX DEPTH = 4.0 FT
TOP OF POND = 5418
BOTTOM OF POND ELEV = 5411

POND F
CAPACITY = 8.89 AC-FT
MAX DEPTH = 8.2 FT
TOP OF POND = 5423
BOTTOM OF POND ELEV = 5415

POND G
CAPACITY = 9.6 AC-FT
MAX DEPTH = 10.7 FT
TOP OF POND = 5422
BOTTOM OF POND ELEV = 5413

POND H
CAPACITY = 6.19 AC-FT
MAX DEPTH = 4.0 FT
TOP OF POND = 5406
BOTTOM OF POND ELEV = 5400

POND TRACT 11A
CAPACITY = 6.75 AC-FT
MAX DEPTH = 7.3 FT
TOP OF POND = 5428
BOTTOM OF POND ELEV = 5420

POND C
CAPACITY = 7.38 AC-FT
MAX DEPTH = 7.6 FT
TOP OF POND = 5430
BOTTOM OF POND ELEV = 5423

GRAPHIC SCALE
200 0 100 200 400 800
(IN FEET)
1 inch = 200 ft.

SURVEY INFORMATION		
FIELD NOTES		
NO.	BY	DATE

BENCH MARKS
ACS BRASS TABLET STAMPED "2-B10 1980"
Geographic Position (NAD 1927)
N.M. State Plane Coordinates (Central Zone)
X= 357,543.73 Y= 1,527,976.48
Ground-to-Grid Factor = 0.99966354
$\Delta\alpha$ = -00°16'30"
SLD 1929 Elevation = 5429.35

AS-BUILT INFORMATION	
CONTRACTOR	
WORK STARTED BY	DATE
INSPECTION'S	
ACCEPTANCE BY	DATE
FIELD	
VERIFICATION BY	DATE
DRAWING	
CORRECTED BY	DATE
MICRO-FILM INFORMATION	
RECORDED BY	DATE
NO.	

ENGINEER'S SEAL
STEVEN M. SALAZAR
NEW MEXICO
(6241)
REGISTERED PROFESSIONAL ENGINEER
DATE

NO.	DATE	REMARKS	BY
		REVISIONS	
		WILSON & COMPANY, ENGINEERS & ARCHITECTS	
		DESIGNED BY	DMD
	DEC 04	DATE	
		DRAWN BY	DMD
	DEC 04	DATE	
		CHECKED BY	SJS
	DEC 04	DATE	

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

THE TRAILS UNIT II
OVERALL POND GRADING PLAN

RECEIVED
DEC 9 - 2004
HYDROLOGY SECTION

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
730084	C-9-Z	4	±44

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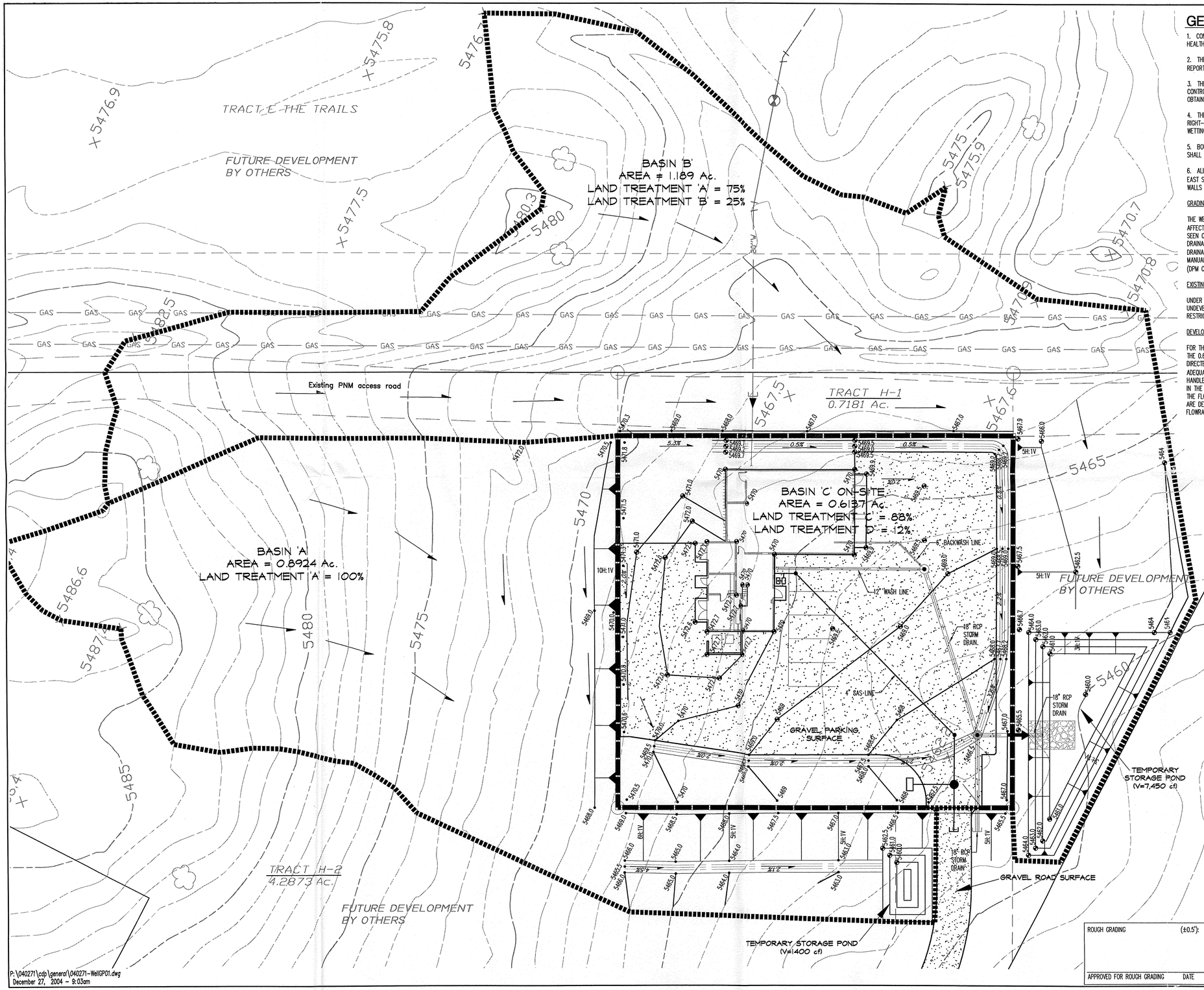

GENERAL NOTES

1. CONTRACTOR MUST OBTAIN A TOPSOIL DISTURBANCE PERMIT FROM THE ENVIRONMENTAL HEALTH DIVISION PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR IS TO REFER TO EARTHWORK SPECIFICATION AS NOTED IN THE SOILS REPORT BY VINYARD & ASSOCIATES DATED 10/2004 (V&A PROJECT #04-1-362).

3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL MEASURES & REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.

4. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE LOTS INTO PUBLIC RIGHT-OF-WAY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND WETTING THE SOIL TO KEEP IT FROM BLOWING.

5. BOULDERS GREATER THAN 3 FEET IN DIAMETER EXCAVATED DURING GRADING ACTIVITIES SHALL BE STOCKPILED AND DISPOSED OF AT THE DISCRETION OF THE OWNER.

6. ALL WALLS SHOWN ARE TO BE PLACED ALONG PROPERTY LINE, EXCEPT FOR WALL ON EAST SIDE. THIS WALL IS APPROXIMATELY 26' WEST OF THE EASTERN PROPERTY LINE. WALLS ARE SHOWN OFFSET FOR VISUAL PURPOSES ONLY.

GRADING AND DRAINAGE PLAN

THE WELL SITE IS LOCATED ON A 0.7181 ACRE LOT WITH ONLY 0.6137 ACRES BEING AFFECTED. IT HAS TWO OFFSITE BASINS (SEE GRADING & DRAINAGE SHEET). AS CAN BE SEEN ON THE FEMA MAPPING EXHIBIT, THE SITE IS NOT SUSCEPTIBLE TO FLOODING. ALL DRAINAGE CALCULATIONS ARE DONE IN ACCORDANCE WITH THE BERNALILLO COUNTY DRAINAGE ORDINANCE (96-5) AND THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, CHAPTER 22.2. THE DESIGN STORM IS THE 100-YEAR 6-HOUR STORM IN ZONE 1 (DPM CHAPTER 22, FIGURE A-1).

EXISTING CONDITIONS

UNDER EXISTING CONDITIONS THE PROJECT SITE IS UNDEVELOPED AND SURROUNDED BY UNDEVELOPED LAND. SINCE FUTURE OFFSITE FLOWS COMING ONTO THE SITE WOULD BE RESTRICTED TO PREDEVELOPMENT LEVELS, ONLY THE EXISTING OFFSITE BASINS ARE USED.

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LEGEND

- GRAVEL SURFACE
- FUTURE PROPERTY BOUNDARY
- BASIN BOUNDARY
- 91.62 •91.62 PROPOSED SPOT ELEVATIONS
- ×92.48 EXISTING SPOT ELEVATIONS
- 5470 EXISTING CONTOUR W/ INDEX ELEVATION
- FLOW ARROW
- PROPOSED RETAINING WALL
- PROPOSED GARDEN WALL, CONCRETE FILLED TO 1-FOOT DEPTH
- PROPOSED SLOPE
- WALL DRAIN

ROUGH GRADING (±0.5'):

APPROVED FOR ROUGH GRADING DATE

AS-BUILT INFORMATION

CONTRACTOR — DATE
STAKED BY — DATE
INSPECTOR'S SIGNATURE BY — DATE
FIELD VERIFICATION BY — DATE
AS-BUILTED BY — DATE
CORRECTED BY — DATE

BENCH MARKS

ACS BRASS TABLET STAMPED "UNION 1969"
Geographic Position (NAD 1927)
N.M. State Plane Coordinates (Central Zone)
X= 353,409.02 Y= 1,523,440.96
Ground-to-Grid Factor = 0.99966044
L.C. = -00°16'58"
(NGVD29-Trig) Elevation = 5522.0

MICROFILM INFORMATION

RECORDED BY — DATE
NO.

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

RICHARD V. HALL, NEW MEXICO, 7918, REGISTERED PROFESSIONAL ENGINEER
Dec 27, 04

No.	Date	REMARKS	By
		REVISIONS	
		DESIGN	

Designed By: RVH — DATE: 12/16/04
Drawn By: LSM — DATE: 12/16/04
Checked By: RVH — DATE: 12/16/04

Bohannan ▲ Huston INC.
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NEW MEXICO UTILITIES, INC.
WELL NO. 9

GRADING AND DRAINAGE PLAN

RECEIVED DEC 27 2004 HYDROLOGY SECTION

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. | Zone Map No. C-9-Z | Sheet 1 Of 2

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December 27, 2004 - 9:03am

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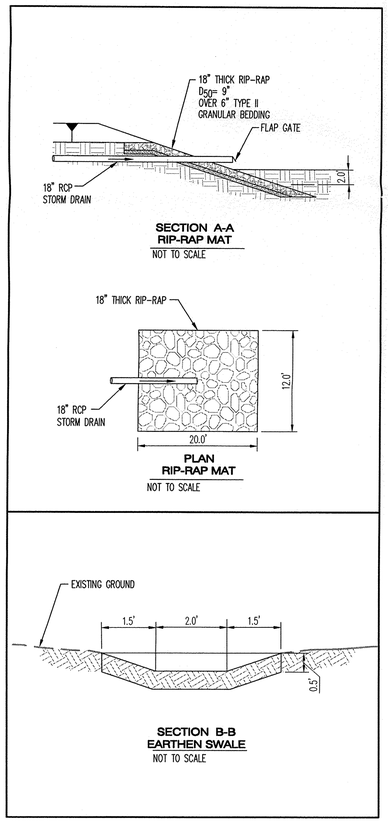

POND VOLUME USING AVERAGE END METHOD

ELEVATION	AREA (ft)	INCREMENTAL VOLUME (ft3)	CUMULATIVE VOLUME (ft3)
5460.00	0.0		
5461.00	1279	639	639
5462.00	1893	1586	2225
5463.00	2594	2243	4468
5464.00	3372	2983	7451

HYDROLOGY PER CHAPTER 22.2 OF THE DEVELOPMENT PROCESS MANUAL

Depth of Precipitation for 6-hr and 24-hr 100-yr Storms in Zone 1

P360 (inches)= 2.20 P1440 (inches)= 2.66

Peak Discharge and Excess Precipitation for Zone 1 (Tables A-9, A-8)

Land Treatment	CFS/Acre	E- Excess Precipitation (6-hr)
A	1.29	0.44
B	2.03	0.67
C	2.87	0.99
D	4.37	1.97

BASIN	Total Area (Ac.)	Areas of Land Treatments (%) A	B	C	D	Flowrate[1] (cfs)	6-hr Volume[2] (cu. Ft.)	24-hr Volume[3] (cu. ft.)
'A' OFF-SITE	0.8924	100	0.0	0.0	0.0	**1.15**	**1424**	**1424**
'B' OFF-SITE	1.189	75	25	0.0	0.0	**1.75**	**2148**	**2148**
'C' ON-SITE	0.6137	0.0	0.0	88	12	**1.87**	**2544**	**2666**
					Total=	**4.77**	**6116**	**6238**

1. Flowrate = (CFS/Acre) * Area

2. 6-hr Volume=weighted E * (A+Aa+Ac+Aa) /12 in/ft. * (43560 sq.ft./acre) (Eq. a-6, page 22-14 DPM)

3. 24-hr Volume=(weighted E * (A+Aa+Ac+Aa))+Aa*(P1440-P360)/12 in/ft * (43560 sq.ft./acre) (Eq. a-7, page 22-14 DPM)

LEGEND

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- BASIN BOUNDARY
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- ×92.46 EXISTING SPOT ELEVATIONS
- 5470 EXISTING CONTOUR W/ INDEX ELEVATION
- FLOW ARROW
- PROPOSED RETAINING WALL
- PROPOSED GARDEN WALL, CONCRETE FILLED TO 1-FOOT DEPTH
- PROPOSED SLOPE
- WALL DRAIN

⚠1 GRADING REQUIREMENTS FOR LANDSCAPE IMPROVEMENTS WITHIN ROCK OUTCROPS

ROCK OUTCROPS EXIST ON THIS SITE. THE CONTRACTOR SHALL GRADE THE SITE TO THE FINISHED GRADES AND ELEVATIONS SHOWN ON THIS PLAN. INCLUDED IN THE SITE GRADING IS ALL ROCK EXCAVATION NECESSARY FOR SITE GRADING, FOUNDATIONS, STRUCTURES, UTILITY AND LANDSCAPE IMPROVEMENTS. ALL AREAS RECEIVING LANDSCAPE IMPROVEMENTS SHALL BE FREE OF ROCK AND HAVE A MAXIMUM DENSITY OF 80% FOR A MINIMUM DEPTH OF 24 INCHES. SHRUBS SHALL REQUIRE A MINIMUM DEPTH OF 36" OVER A 5' DIAMETER AREA. TREES SHALL REQUIRE A 5' MINIMUM DEPTH OVER A 10' x 10' AREA. THE USE OF SPOIL MATERIAL FROM OTHER PORTIONS OF THE SITE IS ACCEPTABLE, SUBJECT TO COA SPECIFICATIONS. SEE LANDSCAPE PLANS FOR SOIL AMENDMENTS ASSOCIATED WITH LANDSCAPING AND PLANTING IMPROVEMENTS.

I CERTIFY THAT THE SITE EXISTING TOPOGRAPHY WAS BASED ON A PHYSICAL SURVEY OF THE PROPERTY AND THAT THE SITE HAS NOT BEEN DISTURBED EXCEPT FOR AN AREA APPROXIMATELY 150 FEET ON A SIDE CENTERED ON THE WELL HEAD. THAT AREA WAS MADE LEVEL DURING THE WELL DRILLING PROJECT.

JAMES C. THOMTE

ROUGH GRADING (±0.5'):

APPROVED FOR ROUGH GRADING DATE

AS-BUILT INFORMATION

CONTRACTOR DATE

STAKED BY DATE

INSPECTION'S DATE

FIELD VERIFICATIONS BY DATE

DRAWINGS CORRECTED BY DATE

BENCH MARKS

ACS BRASS TABLET STAMPED "UNION 1969"

Geographic Position (NAD 1927)

N.M. State Plane Coordinates (Central Zone)

X= 353,409.02 Y= 1,523,440.96

Ground-to-Grid Factor = 0.99986044

$\Delta\alpha$ = -00°16'58"

(NGVD29-Trig) Elevation = 5522.0

MICROFILM INFORMATION

RECORDED BY DATE

NO.

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

RICHARD V. WALL NEW MEXICO 9219 REGISTERED PROFESSIONAL ENGINEER

Dec 27, 04

No.	Date	By	REMARKS
			REVISIONS
			DESIGN
			DATE:12/16/04
			DATE:12/16/04
			DATE:12/16/04

Designed By: RVH

Drawn By: LSM

Checked By: RVH

Bohannan ▲ Huston INC.

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NEW MEXICO UTILITIES, INC.
WELL NO. 9

GRADING AND DRAINAGE DETAILS

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. | Zone Map No. C-9-Z | Sheet 2 Of 2

RECEIVED DEC 27 2004

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December 27, 2004 - 9:03am